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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: John Francis Gordon	§	
Application No: 09/991,863	§	Art Unit: 2877
Filed: November 16, 2001	§	Examiner: To Be Assigned
For: APPARATUS AND METHOD FOR CARRYING OUT ANALYSIS OF SAMPLES USING RADIATION DETECTOR OUTPUT RATIOS	§	Attorney Docket No: GORD-100022-USD9

POWER OF ATTORNEY BY ASSIGNEE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

As co-assignee of a partial undivided interest of the above-identified application, the undersigned, Richard Burstein, of BURSTEIN TECHNOLOGIES, INC, hereby appoints Donald Bollella, Registration No. 35,451, of DB Technical Consulting, 126 Almador, Irvine, California 92614, telephone number (949) 584-3084, to prosecute this patent application and to transact all business in the Patent and Trademark Office connected therewith and with the resulting patent.

All previous powers herein granted by BURSTEIN TECHNOLOGIES, INC. as sole assignee are hereby revoked. This paper does not serve as an agreement or acknowledgement of representation by Donald Bollella or DB Technical Consulting. This appointment is to the exclusion of the inventor(s) and his attorney(s) in accordance with the provisions of 37 CFR § 3.71.

Attached hereto in support of the above are:

A) Request for Entry of Certificate Under 3.73(b);

B) Certificate Under 3.73(b) listing the chain of ownership; and

C) Relevant assignments from John Francis Gordon to the University of Glasgow; from the University of Glasgow to Burstein Technologies, Inc.; and from Burstein Technologies, Inc. to Nagaoka & Co., Ltd.

CORRESPONDENCE INSTRUCTIONS

Please direct all future correspondence to the following address:

Donald Bollella
DB Technical Consulting
126 Almador
Irvine, CA 92614

And kindly direct all telephone calls to Donald Bollella at (949) 584-3084.

Respectfully Submitted,
BURSTEIN TECHNOLOGIES, INC.

Date: March 11, 2004

Richard Burstein
Chief Executive Officer

BURSTEIN TECHNOLOGIES, INC.
2801 Ocean Park Boulevard #13
Santa Monica, CA 90405
(949) 453-1800

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: John Francis Gordon	§ § §	
Application No: 09/991,863	§	Art Unit: 2877
Filed: November 16, 2001	§ §	Examiner: To Be Assigned
For: APPARATUS AND METHOD FOR CARRYING OUT ANALYSIS OF SAMPLES USING RADIATION DETECTOR OUTPUT RATIOS	§ § § §	Attorney Docket No: GORD-100022-USD9

POWER OF ATTORNEY BY ASSIGNEE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

As co-assignee of a partial undivided interest of the above-identified application, the undersigned, Mr. Ryosuke Nagaoka, Director and General Manager of NAGAOKA & CO., LTD., hereby appoints Donald Bollella, Registration No. 35,451, of DB TECHNICAL CONSULTING, 126 Almador, Irvine, California 92614, telephone number (949) 584-3084, to prosecute this patent application and to transact all business in the Patent and Trademark Office connected therewith and with the resulting patent.

Attached hereto in support of the above are:

A) Request for Entry of Certificate Under 3.73(b);

B) Certificate Under 3.73(b) listing the chain of ownership; and

C) Relevant assignment from John Francis Gordon to the University of Glasgow; from the University of Glasgow to Burstein Technologies, Inc.; and from Burstein Technologies, Inc. to Nagaoka & Co., Ltd.

CORRESPONDENCE INSTRUCTIONS

Please direct all future correspondence to the following address:

Donald Bollella
DB Technical Consulting
126 Almador
Irvine, CA 92614

And kindly direct all telephone calls to Donald Bollella at (949) 584-3084.

Respectfully Submitted,

NAGAOKA & CO., LTD.

Date:_____

Ryosuke Nagaoka
Director and General Manager

100022poabyassigneeNGKC[1]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: John Francis Gordon	§	
	§	Art Unit: 2877
Serial No: 09/991,863	§	
	§	Examiner: To Be Assigned
Filed: November 16, 2001	§	
	§	Attorney Docket No: GORD-100022-USD9
For: APPARATUS AND METHOD FOR CARRYING OUT ANALYSIS OF SAMPLES USING RADIATION DETECTOR OUTPUT RATIOS	§	

REQUEST FOR ENTRY OF CERTIFICATE UNDER 37 C.F.R. SECTION 3.73(b) AND SUPPORTING STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In further support of Assignees' interest herein, Applicant respectfully requests entry of the following Certificate Under 37 C.F.R. Section 3.73(b) in connection with the above-identified application.

Applicant believes that no fee is required for filing this communication.

Respectfully submitted,

Date: March 13, 2004

Donald Bollella
Registration No. 35,451

Donald Bollella, Esq.
DB TECHNICAL CONSULTING
126 Almador
Irvine, CA 92614
(949) 584-3084

CERTIFICATE UNDER 37 CFR 3.73(b)

Applicant: John Francis Gordon

Application No: 09/991,863 Filed: November 16, 2001

Entitled: APPARATUS AND METHOD FOR CARRYING OUT ANALYSIS OF SAMPLES USING RADIATION DETECTOR OUTPUT RATIOS

Burstein Technologies, Inc, a U.S. Corporation and Nagaoka & Co,. Ltd., a Japanese Corporation,
(Name of Assignees) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

certifies that it is the assignee of a partial undivided right, title and interest in the patent application identified above by virtue of either:

A.[ ] An assignment from the inventor(s) of the patent application identified above. The assignment was recorded in the Patent and Trademark Office at Reel_____, Frame _____, or for which a copy thereof is attached;

OR

B.[X] A chain of title from the inventor(s), of the patent application identified above, to the current assignee as shown below:

1. From: John Francis Gordon To: University of Glasgow
   The document was recorded in the Patent and Trademark Office at Reel 8634, Frame 0810, or for which a copy thereof is attached.

2. From: University of Glasgow To: Burstein Technologies, Inc.
   The document was recorded in the Patent and Trademark Office at Reel 013832, Frame 0554, or for which a copy thereof is attached.

3. From: Burstein Technologies, Inc. To: Nagaoka & Co., Ltd.
   The document was recorded in the Patent and Trademark Office at Reel_____, Frame_____, or for which a copy thereof is attached.

[ ] Additional documents in the chain of title are listed on a supplemental sheet.

[X] Copies of assignments or other documents in the chain of title are attached.

STATEMENT IN SUPPORT OF ASSIGNEE'S INTEREST

The undersigned has reviewed all the documents in the chain of title of the patent application identified above and, to the best of the undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned (whose title is supplied below) is empowered to sign this certificate on behalf of the assignee.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

March 13, 2004
Date

Donald Bollella

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SEPTEMBER 03, 199

PTAS

100510295A

LAHIVE & COCKFIELD, LLP
ANTHONY A. LAURENTANO, ESQ.
28 STATE STREET
BOSTON, MA 02109

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231.

RECORDATION DATE: 07/31/1997

REEL/FRAME: 8634/0810
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
GORDON, JOHN FRANCIS

DOC DATE: 04/16/1997

ASSIGNEE:
UNIVERSITY COURT OF THE UNIVERSITY OF GLASGOW, THE
UNIVERSITY AVENUE, NO. 2 THE SQUARE
GLASGOW G12 8QQ, UNITED KINGDOM

SERIAL NUMBER: 08809402
PATENT NUMBER:

FILING DATE:
ISSUE DATE:

SHAREIL COLES, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

OMB No. 0651-0011 (exp. 4/94)

Tab settings ⇨⇨⇨▽

100510295

Patent and Trademark Office

JUL 31 1997

RECEIPT

To the Honorable Commissioner of Patents and ... ed original documents or copy thereof.

1. Name of conveying party(ies):

John Francis Gordon

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies)

Name: THE UNIVERSITY COURT OF THE UNIVERSITY OF GLASGOW

Internal Address: _____

Street Address: University Avenue, No. 2 The Square

Glasgow G12 8QQ, United Kingdom

Additional name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance

☒ Assignment ☐ Merger

☐ Security Agreement ☐ Change of Name

☐ Other _____

Execution Date: April 16, 1997

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s)
08/809,402

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Anthony A. Laurentano, Esq.

Internal Address: Lahive & Cockfield, LLP

Street Address: 28 State Street

City: Boston State: MA ZIP: 02109

6. Total number of applications and patents involved: one

7. Total fee (37 CFR 3.41)..... $40.00

☒ Enclosed

☐ Authorized to be charged to deposit account

8. Deposit account number:

12-0080

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Anthony A. Laurentano, Reg. No. 38,220
Name of Person Signing

Anthony A. Laurentano
Signature

7/28/97
Date

Total number of pages including cover sheet, attachments, and document: 2

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents and Trademarks, Box Assignments
Washington, D.C. 20231

07/31/1997 TTHM11 00000001 08809402
FC:581 40.00 OP

SOL. OR JOINT

A S S I G N M E N T

WHEREAS, I, JOHN FRANCIS GORDON, of 5 Park Crescent, Torrance, Glasgow G64 4BH, United Kingdom, have invented an APPARATUS AND METHOD FOR CARRYING OUT ANALYSIS OF SAMPLES for which I am about to make application for Letters Patent of the United States of America, and

WHEREAS, THE UNIVERSITY COURT OF THE UNIVERSITY OF GLASGOW, a corporation of the United Kingdom, having its principal place of business at University Avenue, No. 2 The Square, Glasgow G12 8QQ, United Kingdom, desires to acquire the entire right, title and interest in and to said invention:

APPARATUS AND METHOD FOR CARRYING OUT ANALYSIS OF SAMPLES

NOW, THEREFORE, in consideration of the sum of One Dollar ($1.00) to me in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, I, JOHN FRANCIS GORDON, by these presents do sell, assign and transfer unto said corporation, its successors and assigns, all right, title and interest in the United States of America and all foreign countries in and to said invention as described in the patent application, executed by me on the 16th day of April, 1997, (and I hereby authorize my attorneys, authorized to prosecute said application to here insert the filing date and serial number of the said application, as soon as it is known, Serial No. 08/809,402, filed March 21, 1997), and to any improvements on said invention heretofore or hereafter made while I am in the employ of said corporation, and any divisions or continuations of said application, and all Patents, United States and foreign, granted upon any such applications or for the inventions described therein, and any reissues or extensions of said Patents; and I hereby authorize and request the Commissioner of Patents to issue all Patents on said United States applications to said corporation as assignee thereof.

FOR SAID CONSIDERATIONS, I hereby covenant and agree that I am the owner of the full title herein assigned and have the right to assign the same, and agree that I will communicate to said corporation or its representatives, any facts known to me respecting said invention or inventions and testify in any legal proceedings relating thereto when called upon, and will sign all instructions and documents and render such assistance which in the judgement of said corporation is necessary to vest in it and protect the legal title sought to be assigned.

16th April 1997
Date

John Gordon
JOHN FRANCIS GORDON

UNITED STATES
PATENT AND
TRADEMARK OFFICE

JULY 29, 2003

PTAS

Under Secretary of Commerce For Intellectual Property and
Director of the United States Patent and Trademark Office
Washington, DC 20231
www.uspto.gov

BURSTEIN TECHNOLOGIES, INC.
DONALD BOLLELLA, ESQ.
163 TECHNOLOGY DRIVE
LEGAL DEPARTMENT
IRVINE, CA 92618

102389867A

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 03/10/2003

REEL/FRAME: 013832/0554
NUMBER OF PAGES: 7

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
UNIVERSITY COURT OF THE UNIVERSITY OF GLASGOW

DOC DATE: 02/07/2003

ASSIGNEE:
BURSTEIN TECHNOLOGIES, INC.
163 TECHNOLOGY DRIVE
IRVINE, CALIFORNIA 92618

SERIAL NUMBER: 08809402
PATENT NUMBER: 5892577

FILING DATE: 07/28/1997
ISSUE DATE: 04/06/1999

SERIAL NUMBER: 09156475
PATENT NUMBER: 6256088

FILING DATE: 09/18/1998
ISSUE DATE: 07/03/2001

SERIAL NUMBER: 09407001
PATENT NUMBER:

FILING DATE: 09/28/1999
ISSUE DATE:

SERIAL NUMBER: 09284421
PATENT NUMBER:

FILING DATE: 06/11/1999
ISSUE DATE:

SERIAL NUMBER: 09410837 PATENT NUMBER:	FILING DATE: 10/01/1999 ISSUE DATE:
SERIAL NUMBER: 09411624 PATENT NUMBER:	FILING DATE: 10/01/1999 ISSUE DATE:
SERIAL NUMBER: 09410838 PATENT NUMBER:	FILING DATE: 10/01/1999 ISSUE DATE:
SERIAL NUMBER: 09642996 PATENT NUMBER:	FILING DATE: 08/21/2000 ISSUE DATE:
SERIAL NUMBER: 09643030 PATENT NUMBER: 6339473	FILING DATE: 08/21/2000 ISSUE DATE: 01/15/2002
SERIAL NUMBER: 09665481 PATENT NUMBER: 6476907	FILING DATE: 09/20/2000 ISSUE DATE: 11/05/2002
SERIAL NUMBER: 09665930 PATENT NUMBER: 6327031	FILING DATE: 09/20/2000 ISSUE DATE: 12/04/2001
SERIAL NUMBER: 60283213 PATENT NUMBER:	FILING DATE: 04/11/2001 ISSUE DATE:
SERIAL NUMBER: 09991429 PATENT NUMBER:	FILING DATE: 11/16/2001 ISSUE DATE:
SERIAL NUMBER: 09991863 PATENT NUMBER:	FILING DATE: 11/16/2001 ISSUE DATE:
SERIAL NUMBER: 10121281 PATENT NUMBER:	FILING DATE: 04/11/2002 ISSUE DATE:

SAUNDRA BALLENGER, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

03-14-2003

Form PTO-1595
(Rev. 10/02)
OMB No. 0651-0027 (exp. 6/30/2005)

RE(

102389867

U.S. DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office

Tab settings => => =>

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):
University Court of the University of Glasgow 3/10/03
University Avenue, Galsgow
UNITED KINGDOM

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies)
Name: BURSTEIN TECHNOLOGIES, INC.

Internal Address:

Street Address: 163 Technology Drive

City: Irvine State: CA Zip: 92618

Additional name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment ☐ Merger

☐ Security Agreement ☐ Change of Name

☐ Other

Execution Date: February 7, 2003

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)
See attached list

B. Patent No.(s)
See attached list

Additional numbers attached? ☒ Yes ☐ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Donald Bollella, Esq.

Internal Address: Legal Department

Street Address: Burstein Technologies, Inc.

163 Technology Drive

City: Irvine State: CA Zip: 92618

6. Total number of applications and patents involved 15

7. Total fee (37 CFR 3.41) $600.00

☐ Enclosed

☒ Authorized to be charged to deposit account

8. Deposit account number:

50-1781

(Attach duplicate copy of this page if paying by deposit account)

RECORDATION SECTION
2003 MAR 11 AM 7:37
FINANCE SECTION

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Donald Bollella, Esq.
Name of Person Signing

Signature

March 10, 2003
Date

Total number of pages including cover sheet, attachments, and documents 6

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231

03/13/2003 ECOOPER 00000221 501781 08809402
FC:8021 40.00 OP

SUPPLEMENTAL SHEET TO FORM PTO-1595

Serial No.	Patent No.	Filing Date
08/809,402	(Now US Pat No. 5,892,577)	March 21, 1997
09/156,475	(Now US Pat No. 6,256,088)	September 18, 1998
09/407,001		September 28, 1999
09/284,421		June 11, 1999
09/410,837		October 1, 1999
09/411,624		October 1, 1999
09/410,838		October 1, 1999
09/642,996		August 21, 2000
09/643,030	(Now US Pat No. 6,339,473)	August 21, 2000
09/665,481		September 20, 2000
09/665,930	(Now US Pat No. 6,327,031)	September 20, 2000
60/283,213		April 11, 2001
09/991,429		November 16, 2001
09/991,863		November 16, 2001
10/121,281		April 11, 2002

ACKNOWLEDGEMENT OF ASSIGNMENT AND ASSIGNMENT

WHEREAS, John Francis Gordon (hereinafter referred to as "GORDON") as the inventor of an invention entitled "Apparatus And Method For Carrying Out Analysis Of Samples," as disclosed in application for United States Patent Serial No. 08/809,402, filed March 21, 1997 (hereinafter referred to as the "Gordon I Invention"), has previously assigned the entire right, title, and interest in the invention and to all continuations and divisions thereof, and all patents, United States and foreign, granted upon such applications or for the inventions described therein, and any reissues or extensions of said patents, United States Letters Patent No. 5,892,577 granted April 6, 1999; United States Letters Patent No. 6,256,088 granted July 3, 2001; United States Letters Patent No. 6,327,031 granted December 4, 2001; and United States Letter Patent No. 6,339,473 granted January 15, 2002 having issued (hereinafter referred to as the "Gordon I Patent Rights") to The University Court of The University of Glasgow, a corporation of the United Kingdom, having its principal place of business at University Avenue, Glasgow, United Kingdom (hereinafter referred to as "UNIVERSITY"), as recited in the assignment dated April 16, 1997 recorded on July 31, 1997, in the assignment records of the United States Patent Office at reel/frame number of 8634/0810;

WHEREAS, GORDON as the inventor of the invention entitled "Apparatus And Method For Conducting Assays," as disclosed in application for United States Letters Patent Serial No. 09/284,421, filed April 8, 1999 (hereinafter referred to as the "Gordon II Invention"), has previously assigned the entire right, title, and interest in the invention, and all continuations and divisions thereof, and all patents, United States and foreign, granted upon such application or for the inventions described therein, and any reissues or extensions of said patents (hereinafter referred to as the "Gordon II Patent Rights"), to Molecular Drives Ltd., a Limited Company registered under the Companies Act of 1985, Registered Number SC157075, having a place of business at 39 Western Court, University of Glasgow, Scotland, United Kingdom (hereinafter referred to as "MOLECULAR DRIVES"), as recited in the assignment dated June 1, 1999 recorded on June 11, 1999, in the assignment records of the United States Patent Office at reel/frame number of 010036/0805;

WHEREAS, MOLECULAR DRIVES has assigned the entire right, title, and interest in the Gordon II Patent Rights to UNIVERSITY, as recited in the assignment dated June 7, 1999 recorded on November 18, 1999 in the assignment records of the United States Patent Office at reel/frame number of 010400/0621;

WHEREAS, UNIVERSITY has agreed to sell the above identified Gordon I and Gordon II Inventions and the Gordon I and Gordon II Patent Rights to Burstein Technologies, Inc. (hereinafter referred to as "BTI") pursuant to that certain Exclusive License, Technology Transfer, and Technology Acquisition Agreement dated July 23, 1999 by and between UNIVERSITY, MOLECULAR DRIVES, GORDON, and Digital Drives, Inc., formerly a Nevada corporation (said Digital Drives, Inc. hereinafter referred to as "DIGITAL") and further pursuant to the "Clarification and Amendment of Technology Transfer Agreement between University of Glasgow and Burstein Technologies, Inc" dated November 30, 2001 by and between UNIVERSITY, BTI, and GORDON;

WHEREAS, BTI has prepared and filed U.S. Provisional Patent Application No. 60/283,213 on April 11, 2001 and related U.S. Patent Application No. 10/121,281 on April 11, 2002 entitled "Multi-Parameter Assays Including Analysis Discs and Methods Relating Thereto" (hereinafter referred to as the Gordon III invention), said Gordon III invention being based in part on an unfiled disclosure prepared during GORDON's affiliation with MOLECULAR DRIVES and the UNIVERSITY;

WHEREAS, UNIVERSITY, through its exclusive licensee BTI, has prosecuted and or caused the filing of the following United States applications for Letters Patent of the United States based upon the Gordon I, II, and III Inventions:

Serial No.		Filing Date
08/809,402	(Now US Pat No. 5,892,577)	March 21, 1997
09/156,475	(Now US Pat No. 6,256,088)	September 18, 1998
09/407,001		September 28, 1999
09/248,421		June 11, 1999
09/410,837		October 1, 1999
09/411,624		October 1, 1999
09/410,838		October 1, 1999
09/642,996		August 21, 2000
09/643,030	(Now US Pat No. 6,339,473)	August 21, 2000
09/655,481		September 20, 2000
09/665,930	(Now US Pat No. 6,327,031)	September 20, 2000
60/283,213		April 11, 2001
09/991,429		November 16, 2001
09/991,863		November 16, 2001
10/121,281		April 11, 2002

(said applications being hereinafter referred to as the "Gordon Applications").

WHEREAS, DIGITAL has been merged into BTI as of August 14, 2001;

WHEREAS, UNIVERSITY, the assignor herein is presently the sole owner of the entire right, title, and interest to the Gordon I and Gordon II Inventions and Gordon I and Gordon II Patent Rights without any encumbrances thereon or any contingent or reversionary interests therein; and

WHEREAS, BTI desires to acquire the entire right, title and interest in and to the Gordon I, Gordon II, and Gordon III Inventions and the Gordon I, Gordon II, and Gordon III Patent Rights;

NOW, THEREFORE, for good and valuable consideration as recited in said certain Exclusive License, Technology Transfer, and Technology Acquisition Agreement dated July 23, 1999, and the "Clarification and Amendment" dated November 30, 2001, the receipt and sufficiency of which is hereby acknowledged, UNIVERSITY does hereby sell, assign, transfer and set over unto BTI, its successors and assigns, the entire right, title, and interest in and to said Gordon I, Gordon II, and Gordon III Inventions including the corresponding International Patent Application No. PCT/GB95/02186 filed September 15, 1995, including the priority application thereof GB9418981.8 filed September 21, 1994, and all subsequently filed related applications based thereon; International Patent Application No. PCT/GB97/02708 filed October 8, 1997, and the priority application thereof, GB9620934.1 filed October 8, 1996 and all improvements thereon; and including International Application No. PCT/US02/11620 filed April 11, 2002, and all subsequently filed applications based thereon; in and to any and all patents and patent applications pertaining to or based upon said inventions and improvements, including said identified Gordon Applications, and including any and all divisional and continuing applications and continuations-in-part; and in and to any and all Letters Patents, which may be granted and issued on said Gordon I, Gordon II, and Gordon III Inventions and said Gordon I, Gordon II, and Gordon III Patent Rights, or any of them, not only for, to and in the United States of America, its territories and possessions, but for, to and in all countries foreign thereto, together with and including all priority rights based upon any and all applications in the United States of America covered by this Assignment.

And for the above-named considerations, UNIVERSITY does hereby agree that it will at the request of BTI, execute any and all applications for Letters Patents for said inventions and any and all other papers and documents and do all other and further lawful acts that BTI may reasonably deem necessary or desirable to obtain U.S. and foreign Letters Patents on said inventions, to secure the grant of such Letters Patents and to perfect and vest in BTI the entire right, title, and interest in the inventions, applications, and Letters Patents.

Signed on behalf of
The University Court of the University
Of Glasgow

Dated: 27/01/03

By: DUGALD M MACKIE

Title: Secretary of Court.

(The execution of this document by The University Court Of The University Of Glasgow is being acknowledged by a Notar and an apostille.)

* *

Before me;

Notary Public

Acknowledged By:

Molecular Drives, Ltd.

Dated: 28th Jan 2003

Graham Patterson
Director

(A certificate of acknowledgment is attached hereto for the above execution by Molecular Drives, Inc.)

* *

Acknowledged By:

Dated: Feb 7th 2003

John Francis Gordon
Inventor

(A certificate of acknowledgment is attached hereto for the above execution by John Francis Gordon.)

* *

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Orange } ss.

On February 7, 2003, before me, Jennifer S. Allen
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared John F Gordon
Name(s) of Signer(s)

~~☐ personally known to me~~
☒ proved to me on the basis of satisfactory evidence

to be the person~~(s)~~ whose name~~(s)~~ is~~/are~~ subscribed to the within instrument and acknowledged to me that he~~/she/they~~ executed the same in his~~/her/their~~ authorized capacity~~(ies)~~, and that by his~~/her/their~~ signature~~(s)~~ on the instrument the person~~(s)~~, or the entity upon behalf of which the person~~(s)~~ acted, executed the instrument.

WITNESS my hand and official seal.

JENNIFER S. ALLEN
Comm. # 1336782
NOTARY PUBLIC - CALIFORNIA
Orange County
My Comm. Expires Dec. 29, 2005

Place Notary Seal Above

Jennifer S Allen
Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Acknowledgement of Assignment and Assignment

Document Date: 2/7/03 Number of Pages: 4

Signer(s) Other Than Named Above: _____

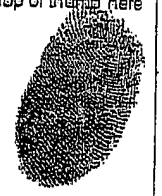
Capacity(ies) Claimed by Signer

Signer's Name: _____

☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: _____

Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here



ASSIGNMENT

WHEREAS, Burstein Technologies, Inc., a Delaware Corporation having offices at 163 West Technology Dr., Ste. 200, Irvine, California, 92618 USA (hereinafter "ASSIGNOR"), represents and warrants that it is the sole owner of the entire right, title, and interest to certain new and useful improvements for which ASSIGNOR has filed patent applications and/or obtained issued patents in the United States and in other countries, which patents and patent applications are listed in Schedule A to this Assignment (hereinafter "the Patents and Patent Applications"); and

WHEREAS, Nagaoka & Co., Ltd., a Japanese corporation having offices at 7-18, Nishinomiyahama 4-Chome, Nishinomiya-Shi, Hyogo, Japan 662-0934 (hereinafter "ASSIGNEE") desires to purchase an undivided partial right, title, and interest in and to the inventions disclosed in the Patents and Patent Applications, such that ASSIGNEE and ASSIGNOR are co-owners of the Patents and Patent Applications;

NOW, THEREFORE, in consideration of mutual covenants and obligations set forth in a contemporaneous Patent Assignment Agreement, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ASSIGNOR hereby further acknowledges that it has sold, assigned, and transferred, and by these presents does hereby sell, assign, and transfer, unto ASSIGNEE, its successors, legal representatives, and assigns, an undivided partial right, title, and interest throughout the world in, to, and under the said improvements, and the said Patents and Patent Applications and all Patents that may be granted thereon, and all provisional applications relating thereto, and all divisions, continuations, reissues, reexaminations, renewals, and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent that may hereafter be filed for said improvements or for the said Patents and Patent Applications in any country or countries foreign to the United States; and ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States, and any Official of any country foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patents for said improvements and all Letters Patents resulting from the Patents and Patent Applications jointly to ASSIGNOR and ASSIGNEE, their successors, legal representatives, and assigns, in accordance with the terms of this Agreement.

ASSIGNOR does hereby sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns an equal undivided partial interest in all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of the said issued Letters Patents;

ASSIGNOR hereby covenants and agrees that it will communicate to ASSIGNEE, its successors, legal representatives, and assigns any facts known to ASSIGNOR respecting the Patents and Patent Applications immediately upon becoming aware of those facts, and that it will testify in any legal proceeding involving any of the Patents and Patent Applications, will sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths, and will generally do everything possible to aid ASSIGNEE, its successors, legal representatives, and assigns to obtain and enforce ASSIGNEE's interest in the Patents and Patent Applications in all countries.

ASSIGNEE hereby accepts and agrees to the foregoing assignment.

[SIGNATURES ON FOLLOWING PAGE]

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 4th day of November, 2003

Burstein Technologies, Inc.

By: _____

Name Printed: Ruvan Burstein

Title: CEO

Date: November 3, 2003

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 4th day of November, 2003

Nagaoka & Co., Ltd.

By: _____

Name Printed: Ryosuke Nagaoka

Title: Director

Date: Nov 4th, 2003

STATE OF California)
) ss.
COUNTY OF Orange)

On 11/4/2003, before me, Suketu R. Bhatt personally appeared Richard Burstein — of Burstein Technologies, Inc., ~~personally known to me~~ (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

[SEAL]

Suketu R. Bhatt
Notary Public

SUKETU R. BHATT
Commission # 1416933
Notary Public - California
Orange County
My Comm. Expires May 29, 2007

Schedule A

BTI List of Issued Patents, Published and Unpublished Applications

Issued Patents

Title	Country	Patent No.	Issue Date
Apparatus and Method for Conducting Assays	New Zealand	335863	10/08/97
Antiviral Liposome having Coupled Target-Binding Moiety and Hydrolytic Enzyme	U.S.	5,718,915	02/17/98
Apparatus and Method for Carrying Out Analysis of Samples	U.S.	5,892,577	04/06/99
Laboratory in a Disk	Latvia	12469	09/14/99
Laboratory in a Disk	Liberia	00015	09/27/99
Antiviral Supramolecules Containing Target-Binding Molecules and Therapeutic Molecules Bound to Spectrin	U.S.	5,997,861	12/07/99
Laboratory in a Disk	Singapore	67630	01/25/00
Laboratory in a Disk	U.S.	6,030,581	02/29/00
Laboratory in a Disk	Mongolia	1627	03/01/00
Apparatus and Method for Carrying Out Analysis of Samples	Australia	714652	04/20/00
Laboratory in a Disk	Sri Lanka	11835	06/06/00
Laboratory in a Disk	Lithuania	4681	07/25/00
Laboratory in a Disk	Turkey	1999 02440	08/21/00
Apparatus and Method for Conducting Assays	Singapore	65857	11/21/00
Cleavable Signal Element Device and Method	New Zealand	333907	01/11/01
Apparatus and Method for Conducting Assays	Australia	724660	01/25/01
Cleavable Signal Element Device and Method	Australia	725065	01/25/01
Cassette and Applicator for Biological and Chemical Sample Collection	U.S.	US 6,196,979 B1	03/06/01
Laboratory in a Disk	Great Britain	2 337 113 B	03/21/01
Laboratory in a Disc	Madagascar	00152	04/13/01
Apparatus and Method for Carrying Out Analysis of Samples	U.S.	6,256,088 B1	07/03/01
Laboratory in a Disk	New Zealand	338017	07/12/01
Gene Sequencer and Methods	U.S.	6,274,373 B1	08/14/01
Laboratory in a Disk	Slovenia	20346	09/07/01
Gene Sequencer and Methods	Singapore	67245	10/16/01
Spatially Addressable, Cleavable Reflective Signal Elements, Assay Device and Method	U.S.	6,312,901 B2	11/06/01
Cassette and Applicator for Biological and Chemical Sample Collection	Taiwan	NI-135871	11/07/01
Apparatus and Semi-Reflective Optical System for Carrying Out Analysis of Samples	U.S.	6,327,031 B1	12/04/01
Spatially Addressable, Cleavable Reflective Signal	U.S.	6,331,275 B1	12/18/01

Title	Country	Patent No.	Issue Date
Elements, Assay Device and Method			
Gene Sequencer and Methods	New Zealand	337893	01/10/02
Apparatus and Method for Carrying Out Analysis of Samples	US	6,339,473 B1	01/15/02
Optical Disk-Based Assay Devices and Methods	US	6,342,349 B1	01/29/02
Laboratory in a Disk	Australia	740195	02/14/02
Liposome Having Attached Target-Binding Moiety and Artherosclerotic Plaque Interacting Moiety	US	6,379,699 B1	04/30/02
Gene Sequencer and Methods (div.)	New Zealand	512488	05/13/02
Apparatus and Method for Carrying Out Analysis of Samples	Canada	2,200,562	05/21/02
Laboratory in a Disk	St. Lucia	GB 2 337 113 A	07/1/02
Cleavable Signal Element Device and Method	Israel	127938	7/8/02
Gene Sequencer and Methods	Australia	745673	07/11/02
Analytical Disc with Optically Trackable Encoded Information and Related Optical Inspection System	Australia	746419	08/15/02
Monomolecular Adhesion Methods for Manufacturing Microfabricated Multiaminate Devices	US	US 6,503,359 B2	1/7/03
Laboratory in a Disk	Israel	131619	3/2/03
Apparatus and Method for Conducting Assays	EP	0938382 B1	3/12/03
Gene Sequencer and Method for Determining the Nucleotide Sequence of a Chromosome	US	US 6,566,069 B2	5/20/03

Published Applications

Title	Country	Publication No.	Publication Date
Apparatus and Method for Carrying Out Analysis of Samples	PCT	WO 96/09548	03/28/96
Complementarily Bonded Two and Three-Dimensional Supramolecular Structures	PCT	WO 96/13522	05/09/96
Novel Therapeutic Binding Molecule-Enzyme Complexes	PCT	WO 96/32841	10/24/96
Cleavable Signal Element, Device and Method	PCT	WO 98/01533	01/15/98
Spatially Addressable Combinatorial Chemical Arrays in CD-ROM Format	PCT	WO 98/12559	03/26/98
Apparatus and Method for Conducting Assays	PCT	WO 98/15356	04/16/98
Gene Sequencer and Methods	PCT	WO 98/37238	08/27/98
Laboratory in a Disk	PCT	WO 98/38810	09/03/98
Laboratory in a Disk	Great Britain	GB 2337113A	11/10/99
Laboratory in a Disk	Indonesia	022.965	12/23/99
Optical Disk-Based Assay Devices and Methods	PCT	WO 00/05582	02/03/00
Laboratory in a Disk	Vietnam	143 Vol.A #2035	02/25/00
Cassette and Applicator for Biological and Chemical Sample Collection	PCT	WO 00/10460	03/02/00
Laboratory in a Disk	Czech	4-2000	04/12/00

Title	Country	Publication No.	Publication Date
Trackable Optical Discs with Concurrently Readable Analyte Material	PCT	WO 00/26677	05/11/00
Laboratory in a Disk	Mexico	06/00 Gazette	09/08/00
Laboratory in a Disk	Hong Kong	00102314.5	09/08/00
Cleavable Signal Element, Device, and Method	Mexico		
Cleavable Signal Element, Device, and Method	New Zealand	Journal #1455	09/29/00
Methods and apparatus for Physically Patterning Nonoperational Structures of an Optical Disc	PCT	WO 01/15154	03/01/01
Optical Disk-Based Assay Devices and Methods	Europe	1097378	05/09/01
Cassette and Applicator for Biological and Chemical Sample Collection	Europe	1005039	06/13/01
Trackable Optical Discs with Concurrently Readable Analyte Material	Korea	2001-92427	10/24/01
Trackable Optical Discs with Concurrently Readable Analyte Material	Hong Kong	1035929A	12/14/01
Methods and Apparatus for Optical Disc Data Acquisition Using Physical Synchronization Markers	PCT	WO 02/16037 A1	02/28/02
Cassette and Applicator for Biological and Chemical Sample Collection	PH	VOL IV-NO. 14 (pp 153-154)	04/11/02
Gene Sequencer and Method for Determining the Nucleotide Sequense of a Chromosome	US	US-2002-0045174-A 1	04/18/02
Cassette and Applicator for Biological and Chemical Sample Collection	Argentina	AR 02055A1	05/02/02
Disc Drive System and Methods for Use With Bio-Discs	PCT	WO 02/39446 A2	05/16/02
Optical Biodiscs With Reflective Layers	PCT	WO 02/41004 A2	05/23/02
Apparatus and Methods for Separating Agglutinants and Disperse Particles	PCT	WO 02/42780 A2	05/30/02
Dual Bead Assays Including Optical Biodiscs and Methods Relating Thereto	PCT	WO 02/42498 A2	05/30/02
Apparatus and Methods for Separating Components of Particulate Suspension	PCT	WO 02/43866 A2	06/06/02
Methods and Apparatus for Detecting and Quantifying Lymphocytes with Optical Biodiscs	PCT	WO 02/44695	06/06/02
Optical Disc Assemblies for Assemblies for Performing Assays	PCT	WO 02/46762 A2	06/13/02
Optical Discs for Measuring Analytes	PCT	WO 02/46721 A2	06/13/02
Methods for Detecting Analytes Using Optical Discs and Optical Disc Readers	PCT	WO 02/46761 A2	06/13/02
Multiple Data Layer Optical Discs for Detecting Analytes	PCT	WO 02/47071 A2	06/13/02
Optical Disc Assemblies for Assemblies for Performing Assays	US	US-2002-0071362-A1	06/13/02
Methods for Detecting Analytes Using Optical Discs and Optical Disc Readers	US	US-2002-0071359-A1	06/13/02
Apparatus and Methods for Separating Components of Particulate Suspension	US	US-2002-0076354-A 1	06/20/02
Detection System for Disc-Based Laboratory and Improved Optical Bio-Discs Including Same	US	US-2002-0076805-A 1	06/20/02
Surface Assembly for Immobilizing DNA Capture Probes and Bead-Based Assay Including Optical	PCT	WO 02/051537 A2	07/04/02

Title	Country	Publication No.	Publication Date
Bio-Discs and Methods Relating Thereto			
Optical Disc Analysis System Including Related Methods for Biological and Medical Imaging	PCT	WO 02/056311 A2	7/18/02
Methods and Apparatus for Blood Typing with Optical Bio-Discs	US	US-2002-0098528-A1	07/25/02
Multiple Data Layer Optical Discs for Detecting Analytes	US	US-2002-0097658-A1	07/25/02
Methods and Apparatus for Patterning Nonoperational Structures on an Optical Disc	Germany	DE 100 84 923 T1	07/25/02
Methods and Apparatus for Blood Typing with Optical Bio-Discs	PCT	WO 02/059622 A1	08/01/02
Interactive System for Analyzing Biological Samples and Processing Related Information and the Use Thereof	US	US-2002-0118355-A1	8/29/02
Disc Drive System and Methods for Use with Bio-Discs	US	US-2002-0122364-A1	09/05/02
Methods for DNA Conjugation Onto Solid Phase Including Related Optical Biodiscs and Disc Drive Systems	PCT	WO 02/068696 A2	09/06/02
Methods for Decreasing Non-Specific Binding of Beads in Dual Bead Assays Including Related Optical Biodiscs and Disc Drive Systems	PCT	WO 02/068697 A2	09/06/02
Dual Bead Assays Using Cleavable Spacers and/or Ligation to Improve Specificity and Sensitivity Including Related Methods and Apparatus	PCT	WO 02/073605 A2	09/19/02
Use of Restriction Enzymes and Other Chemical Methods to Decrease Non-Specific Binding in Dual Bead Assays and Related Bio-Discs, Methods, and System Apparatus for Detecting Medical Targets	PCT	WO 02/071929 A2	09/19/02
Optical Discs for Measuring Analytes	US	US-2002-0145960-A1	10/10/02
Multi-Parameter Assays Including Analysis Discs and Methods Relating Thereto	US	US-2002-0151043-A1	10/17/02
Interactive System for Analyzing Biological Samples and Processing Related Information and the Use Thereof	PCT	WO 02/084302	10/24/02
Optical Biodiscs with Reflective Layer	US	US-2002-0163642-A1	11/07/02
Surface Assembly for Immobilizing DNA Capture Probes and Bead-Based Assay Including Optical Bio-Discs and Methods Relating Thereto	US	US-2002-0168652-A1	11/14/02
Methods for DNA Conjugation onto Solid Phase Including Related Optical Biodiscs and Disc Drive Systems	US	US2002-0168663-A1	11/14/02
Methods for Decreasing Non-Specific Binding of Beads in Dual Bead Assays Including Related Optical Biodiscs and Disc Drive Systems	US	US-2002-0172980-A1	11/21/02
Variable Sampling Control for Rendering Pixelization of Analysis Results in a Bio-Disc Assembly and Apparatus Relating Thereto	US	US-2002-0171838-A1	11/21/02
Optical Disc Analysis System Including Related Methods for Biological and Medical Imaging	US	US-2002-0176342-A1	11/28/02

Title	Country	Publication No.	Publication Date
Surface Assembly For Immobilizing DNA Capture Probes In Genetic Assays Using Enzymatic Reactions To Generate Signal In Optical Bio-Discs And Methods Relating Thereto	PCT	WO 02/094991	11/28/02
Methods and Apparatus for Analyzing Operational and Nonoperational Data Acquired from Optical Discs	PCT	WO 02/095740	11/28/02
Apparatus and Methods for Separating Agglutinants and Disperse Particles	US	US-2002-0196435-A1	12/26/02
Dual Bead Assays Including Optical Biodiscs and Methods Relating Thereto	US	US-2003-0003464-A1	1/2/03
Optical Disc Analysis System Including Related Methods for Biological and Medical Imaging	PCT	WO 03/007293	1/23/03
Optical Analysis Disc and Related Drive Assembly for Performing Interactive Centrifugation	PCT	WO 03/009107	1/30/03
Transmissive Optical Disc Assemblies for Performing Physical Measurements and Methods Relating Thereto	PCT	WO 03/009010	1/30/03
Magnetic Assisted Detection of Magnetic Beads Using Optical Disc Drives	PCT	WO 03/010563	2/6/03
Optical Disc System And Related Detecting And Decoding Methods For Analysis Of Microscopic Structures	US	US-2003-0035352-A1	2/20/03
Methods for Qualitative and Quantitative Analysis of Cells and Related Optical Bio-Disc Systems	PCT	WO 03/021223 A2	3/13/03
Dual Bead Assays Using Cleavable Spacers and/or Ligation to Improve Specificity and Sensitivity Including Related Methods and Apparatus	US	US-2003-0054376-A1	3/20/03
Nuclear Morphology Based Identification and Quantification of White Blood Cell Types Using Optical Bio-Disc Systems	PCT	WO 03/023354 A2	3/20/03
Methods for Differential Cell Counts Including Related Apparatus and Software Performing Same	PCT	WO 03/023571 A2	3/20/03
Surface Assembly For Immobilizing DNA Capture Probes In Genetic Assays Using Enzymatic Reactions To Generate Signal In Optical Bio-Discs And Methods Relating Thereto	US	US-2003-0059803-A1	3/27/03
Optical Analysis Disc and Related Drive Assembly for Performing Interactive Centrifugation	US	US-2003-0064872-A1	4/3/03
Method and Apparatus for Bonded Fluidic Circuit for Optical Bio-Disc	PCT	WO 03/027723 A2	4/3/03
Dual Bead Assays Including Covalent Linkages for Improved Specificity and Related Optical Analysis Discs	US	US-2003-0077598-A1	4/24/03
Transmissive Optical Disc Assemblies for Performing Physical Measurements and Methods Relating Thereto	US	US-2003-0077627-A1	4/24/03
Use of Restriction Enzymes and Other Chemical Methods to Decrease Non-Specific Binding in Dual Bead Assays and Related Bio-Discs, Methods, and System Apparatus for Detecting Medical Targets	US	US-2003-0082568-A1	5/1/03
Methods for Differential Cell Counts Including Related Apparatus and Software for Performing	US	US-2003-0096324-A1	5/22/03

Title	Country	Publication No.	Publication Date
Same			
Optical Bio-Discs and Fluidic Circuits for Analysis of Cells and Methods Relating Thereto	PCT	WO 03/044481 A2	5/30/03
Methods and Apparatus for Blood Typing with Optical Bio-Discs	PCT	WO 03/043403 A2	5/30/03
Magneto-Optical Bio-Discs and Systems Including Related Methods	PCT	WO 03/046511 A2	6/5/03
Methods and Apparatus for Detecting and Quantifying Lymphocytes with Optical Biodiscs	US	US-2003-0104486-A1	6/5/03
Nuclear Morphology Based Identification and Quantification of White Blood Cell Types Using Optical Bio-Disc Systems	US	US-2003-0113925-A1	6/19/03
Methods for Qualitative and Quantitative Analysis of Cells and Related Optical Bio-Disc Systems	US	US-2003-0129665-A1	7/10/03
Adhesion Methods for Manufacturing Multilaminate Devices	US	US-2003-0136509-A1	7/24/03
Method and Apparatus for Visualizing Data	PCT	WO 03/060668 A2	7/24/03
Capture Layer Assemblies for Cellular Assays Including Related Optical Analysis Discs and Methods	US	US-2003-0143637-A1	7/31/03
Apparatus and Method for Carrying Out Analysis of Samples	EP	1338887 (A)	8/27/03

US Provisional Applications

BTI Code	Title	Filing Date
BTI1 96100401(USP)	Assay Element and Device	7/8/96
DEME 96100301(USP)	Spatially Addressable Combinatorial Chemical Arrays in CD-ROM Format	9/20/96
BTI1 96100402(USP2)	Assay Method	11/1/96
BTI1 97100501(USP)	Gene Sequencer and Methods	2/21/97
BTI1 97100601(USP)	Laboratory in a Disk	2/28/97
BTI1 96100405(USP3)	Spatially Addressable, Cleavable Signal Elements, Static and Continuous Assay Device and Methods	7/21/97
BTI1 98100803(USP)	Trackable Optical Discs with Concurrently Readable Nonoperational Features for Clinical Immunoassay	5/14/99
BTI1 99101001(USP)	Methods and apparatus for Patterning Nonoperational Structures on an Optical Disc	8/23/99
BTI1 99101201(USP)	Methods and Apparatus for Optical Disc Data Acquisition Using Physical Synchronization Markers	8/23/99
PROV-101	Interactive Method and System for Analyzing Biological Samples and Processing Related Medical Information Using Specially Prepared Bio-Optical Disc, Optical Disc Drive, and Internet Connections	11/8/00
PROV-102	Optical Disc Drive For Bio-Optical Disc	11/9/00
PROV-103	Optical Disc Assembly for Performing Microscopy and Spectroscopy Using Optical Disc Drive	11/16/00
PROV-104	Methods, Systems and Apparatus Relating to Bio-Discs and Bio-Drives	11/16/00
PROV-107	Clinical Diagnostic Optical Disc and Related Methods for Blood Typing, DNA Assays, and Molecular Analysis Including Processing Software	11/17/00
PROV-105	Optical Bio-Disc Including Microfluidic Circuit for Separation and Quantification of Agglutinated Microparticles or Cells and Methods Relating Thereto	11/22/00
PROV-106	Bioactive Solid Phase for Specific Cell Capture and Optical Bio-Disc Including Same	11/22/00
PROV-108	Dual Bead Assays and Related Micro Disc Arrays for Use on Optical Disc	11/27/00
PROV-110	Optical Disc Based Diagnostic Platform Including DNA Arrays and Dual Bead Assay Multiplexing	11/28/00
PROV-109	Microfluidic Circuit for Separating and Metering Fluid Components From a Particulate Suspension and Optical Bio-Disc and Drive Assembly Relating Thereto	12/1/00
PROV-111	Optical Disc Assembly for Performing Assays	12/8/00
PROV-112	Optical Bio-Discs for Performing Measurements of Physical Specimens	12/12/00
PROV-114	Detection System for Disk-Based Laboratory and Improved Optical Bio-Disc Including Same	12/15/00
PROV-113	Surface Assembly for Immobilizing DNA Capture Probes and Bead-Based Assay Including Optical Bio-Discs and Methods Relating Thereto	12/22/00
PROV-118	Device and Methods for Performing Qualitative and Quantitative Analysis on an Optical Disc Platform	1/4/01
PROV-115	Methods and Apparatus for Detecting Investigational	1/11/01

BTI Code	Title	Filing Date
	Features on a Surface of an Optical Disc Assembly	
PROV-119	Disklab Diagnostic Platform	1/18/01
PROV-116A	Signal Processing Apparatus and Methods for Obtaining Signal Signatures of Investigational Features Detected on a Surface of an Optical Disc Assembly	2/20/01
PROV-125	Methods for Attaching Capture DNA and Reporter DNA to Solid Phase Including Selection of Bead Types as Solid Phase	2/27/01
PROV-128	Reduction of Non-Specific Binding in Dual Bead Assays by Selection of Bead Type and Bead Treatment	2/28/01
PROV-131	Mixing Methods to Reduce Non-Specific Binding in Dual Bead Assays	2/28/01
PROV-132	Dual Bead Assays Including Linkers to Reduce Non-Specific Binding	3/1/01
PROV-137	Biological Assays Using Dual Bead Multiplexing Including Optical Bio-Disc and Related Methods	3/1/01
PROV-129	Reduction of Non-Specific Binding in Dual Bead Assays by Selection of Buffer Conditions and Wash Conditions	3/12/01
PROV-136	Surface Assembly for Immobilizing Capture Agents and Dual Bead Assays Including Optical Bio-Disc and Methods Relating Thereto	3/14/01
PROV-126	Methods of Conjugation for Attaching Capture DNA and Reporter DNA to Solid Phase	3/22/01
PROV-133	Dual Bead Assays Including Use of Restriction Enzymes to Reduce Non-Specific Binding	3/23/01
PROV-134	Dual Bead Assays Including Use of Chemical Methods to Reduce Non-Specific binding	3/23/01
PROV-127	Use of Double Stranded DNA for Attachment to Solid Phase to Reduce Non-Covalent Binding	3/26/01
PROV-130	Reduction of Non-Specific Binding of Dual Bead Assays by Use of Blocking Agents	3/26/01
PROV-135	Dual Bead Assays for Detecting Medical Targets	3/26/01
PROV-138	Dual Bead Assays Using Cleavable Spacers to Improve Specificity and Sensitivity	3/26/01
PROV-139	Improved Dual Bead Assays Using Ligation	3/26/01
PROV-146	Multi-Parameter Assay Apparatus	4/11/01
PROV-170	Variable Sampling Control For Rendering Pixelation of Analysis Results In Optical Bio-Disc Assembly And Apparatus Relating Thereto	5/16/01
PROV-116B	Signal Processing Apparatus and Methods for Obtaining Signal Signatures of Investigational Features Detected on a Surface of an Optical Disc Assembly	5/18/01
PROV-165A	Surface Assembly for Immobilizing DNA Capture Probes Using Pellets as Reporters in Genetic Assays Including Optical Bio-Discs and Methods Relating Thereto	5/18/01
PROV-102B	Disc Drive Assembly For Optical Bio-Discs	5/22/01
PROV-177	Optical Discs and Assemblies for Detection of Microscopic Structures Using Focal Zone Control	5/24/01
PROV-111B	Optical Disc Assembly for Performing Assays	5/29/01
PROV-112B	Optical Bio-Discs for Performing Measurements of Physical Specimens	5/29/01
PROV-216	Clinical Diagnostic Optical Bio-Disc And Related Methods	7/3/01

BTI Code	Title	Filing Date
	For Selection And Detection Of Lymphocytes Including Helper-Inducer/Suppressor-Cytotoxic Cells	
PROV-177B	Optical Discs and Assemblies for Detection of Microscopic Structures Using Focal Zone Control	7/6/01
PROV-218	Optical Disc System and Related Decoding Methods for Detecting Microscopic Structures	7/10/01
PROV-217	Optical Disc System for Detecting Microscopic Structures and Methods Relating Thereto	7/12/01
PROV-219	Multi-Purpose Optical Analysis Disc for Conducting Assays and Various Reporting Agents for Use Therewith	7/12/01
PROV-220A	Quantitative and Qualitative Methods for Cell Isolation and Typing Including Immunophenotyping	7/17/01
PROV-221A	Capture Layer Assemblies and Optical Bio-Discs for Immunophenotyping	7/17/01
PROV-112C	Optical Bio-Discs for Performing Measurements of Physical Specimens	7/18/01
PROV-124	Transmissive Optical Disc Assemblies for Performing Physical Measurements and Methods Relating Thereto	7/19/01
PROV-222A	Methods for Imaging Blood cells, Blood-Borne Parasites and Pathogens, and Other Biological Matter Including Related Optical Bio-Discs and Drive Assemblies	7/19/01
PROV-179	Optical Disc Including Zones to Control Acquisition of Signals from Investigational Features Located Thereon	7/20/01
PROV-214	Optical Analysis Disc and Related Drive Assembly for Performing Interactive Centrifugation	7/20/01
PROV-236	Methods For Using Different Sized Reporter Beads With Multiple Combinations Of Ligands And Receptors To Generate Distinct Diagnostic Signals In Optical Bio-Disc System	7/20/01
PROV-220B	Quantitative and Qualitative Methods for Cell Isolation and Typing Including Immunophenotyping	7/23/01
PROV-221B	Capture Layer Assemblies and Optical Bio-Discs for Immunophenotyping	7/23/01
PROV-222B	Methods for Imaging Blood cells, Blood-Borne Parasites and Pathogens, and Other Biological Matter Including Related Optical Bio-Discs and Drive Assemblies	7/23/01
PROV-223A	Optical Analysis Discs Including Fluidic Circuits for Optical Imaging and Quantitative Evaluation of Blood Cells Including Lymphocytes	7/23/01
PROV-224A	Methods for Differential Cell Counts Including Leukocytes and Use of Optical Bio-Disc for Performing Same	7/24/01
PROV-225A	Optical Analysis Discs Including Microfluidic Circuits for Performing Cell Counts	7/24/01
PROV-237	Bonded Fluidic Circuit for Optical Bio-Disc	7/24/01
PROV-238	Magnetic Assisted Detection of Magnetic Beads Using Optical Disc Drives	7/24/01
PROV-226A	Methods for Reducing Non-Specific Binding of Cells on Optical Bio-Discs Utilizing Charged Matter Including Heparin, Plasma, or Poly-Lysine	7/25/01
PROV-227A	Methods for Reducing Non-Specific Binding of Cells on Optical Bio-Discs Utilizing Blocking Agents	7/25/01
PROV-235A	Methods for Reducing Bubbles in Fluidic Chambers Using	7/25/01

BTI Code	Title	Filing Date
	Polyvinyl Alcohol and Related Techniques for Achieving Same in Optical Bio-Discs	
PROV-228A	Sealing Methods for Containment of Hazardous Biological Materials within Optical Analysis Disc Assemblies	7/27/01
PROV-229A	Methods for Calculating Qualitative and Quantitative Ratios of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Optical Bio-Disc Platform	7/27/01
PROV-230A	Quantitative and Qualitative Methods for Characterizing Cancerous Blood Cells Including Leukemic Blood Samples Using Optical Bio-Disc Platform	7/27/01
PROV-231A	Methods for Quantitative and Qualitative Characterization of Cancerous Blood Cells Including Lymphoma Blood Samples Using Optical Bio-Disc Platform	8/15/01
PROV-232A	Methods for Specific Cell Capture by Off-Site Incubation of Primary Antibodies with Sample and Subsequent Capture by Surface-Bound Secondary Antibodies and Optical Bio-Disc Including Same	8/20/01
PROV-233A	RBC Lysis Protocol Evaluations of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Whole Blood and Related Optical Bio-Disc	8/20/01
PROV-234A	RBC Sieving Protocol Evaluations of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Whole Blood and Related Optical Bio-Disc	8/20/01
PROV-165B	Surface Assembly for Immobilizing DNA Capture Probes in Genetic Assays Using Enzymatic Reactions to Generate Signal in Optical Bio-Discs and Methods Relating Thereto	8/21/01
PROV-136B	Surface Assembly for Immobilizing Capture Agents and Dual Bead Assays Including Optical Bio-Disc and Methods Relating Thereto	8/24/01
PROV-220C	Quantitative and Qualitative Methods for Cell Isolation and Typing Including Immunophenotyping	8/30/01
PROV-221C	Capture Layer Assemblies and Optical Bio-Discs for Immunophenotyping	8/31/01
PROV-222C	Methods for Imaging Blood cells, Blood-Borne Parasites and Pathogens, and Other Biological Matter Including Related Optical Bio-Discs and Drive Assemblies	9/7/01
PROV-223B	Optical Analysis Discs Including Fluidic Circuits for Optical Imaging and Quantitative Evaluation of Blood Cells Including Lymphocytes	9/11/01
PROV-224B	Methods for Differential Cell Counts Including Leukocytes and Use of Optical Bio-Disc for Performing Same	9/12/01
PROV-225B	Optical Analysis Discs Including Microfluidic Circuits for Performing Cell Counts	9/14/01
PROV-226B	Methods for Reducing Non-Specific Binding of Cells on Optical Bio-Discs Utilizing Charged Matter Including Heparin, Plasma, or Poly-Lysine	9/17/01
PROV-177C	Optical Discs and Assemblies for Detection of Microscopic Structures Using Focal Zone Control	9/19/01
PROV-227B	Methods for Reducing Non-Specific Binding of Cells on Optical Bio-Discs Utilizing Blocking Agents	9/20/01
PROV-235B	Methods for Reducing Bubbles in Fluidic Chambers Using Polyvinyl Alcohol and Related Techniques for Achieving	9/24/01

BTI Code	Title	Filing Date
	Same in Optical Bio-Discs	
PROV-228B	Sealing Methods for Containment of Hazardous Biological Materials within Optical Analysis Disc Assemblies	10/3/01
PROV-229B	Methods for Calculating Qualitative and Quantitative Ratios of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Optical Bio-Disc Platform	10/10/01
PROV-230B	Quantitative and Qualitative Methods for Characterizing Cancerous Blood Cells Including Leukemic Blood Samples Using Optical Bio-Disc Platform	10/19/01
PROV-231B	Methods for Quantitative and Qualitative Characterization of Cancerous Blood Cells Including Lymphoma Blood Samples Using Optical Bio-Disc Platform	10/19/01
PROV-260	Segmented Area Detector for BioDrive and Methods Relating Thereto	10/24/01
PROV-232B	Methods for Specific Cell Capture by Off-Site Incubation of Primary Antibodies with Sample and Subsequent Capture by Surface-Bound Secondary Antibodies and Optical Bio-Disc Including Same	10/26/01
PROV-220D	Quantitative and Qualitative Methods for Cell Isolation and Typing Including Immunophenotyping	11/7/01
PROV-226C	Methods for Reducing Non-Specific Binding of Cells on Optical Bio-Discs Utilizing Charged Matter Including Heparin, Plasma, or Poly-Lysine	11/9/01
PROV-220E	Quantitative and Qualitative Methods for Cell Isolation and Typing Including Immunophenotyping	11/13/01
PROV-221D	Capture Layer Assemblies and Optical Bio-Discs for Immunophenotyping	11/14/01
PROV-229C	Methods for Calculating Qualitative and Quantitative Ratios of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Optical Bio-Disc Platform	11/30/01
PROV-261	Optical Disc Analysis System Including Related Signal Processing Methods and Software	1/14/02
PROV-234B	RBC Sieving Protocol Evaluations of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Whole Blood and Related Optical Bio-Disc	1/17/02
PROV-233B	RBC Lysis Protocol Evaluations of Helper/Inducer-Suppressor/Cytotoxic T-Lymphocytes Using Whole Blood and Related Optical Bio-Disc	1/18/02
PROV-262A	Methods of Chemistry Deposition for Colorimetric and Fluorescent Assays as Implemented on Optical Analysis Discs	1/22/02
PROV-272	Biosafe Optical Analysis Disc	1/24/02
PROV-262B	Methods of Chemistry Deposition for Colorimetric and Fluorescent Assays as Implemented on Optical Analysis Discs	1/25/02
PROV-260B	Segmented Area Detector for BioDrive and Methods Relating Thereto	1/28/02
PROV-265A	Data Capture and Signal Processing for Colorimetric and Fluorescent Assays as Implemented on Transmissive Optical Analysis Discs	1/28/02
PROV-273	Biosafe Optical Disc Tray for Use with Disc Drive	1/28/02
PROV-263A	Sample Preparation for Colorimetric and Fluorescent	1/29/02

BTI Code	Title	Filing Date
	Assays as Implemented on Optical Analysis Discs	
PROV-264A	Sample Preparation for Colorimetric and Fluorescent Assays as Implemented on Optical Analysis Discs	1/29/02
PROV-268A	Methods and Related Apparatus for Evaluation of Chromagens for Use on Optical Bio-Disc	1/29/02
PROV-275	Optical Discs including Equi-Radial and/or Spiral Analysis Zones and Related Disc Drive Systems and Methods	1/29/02
PROV-277	Methods and Apparatus for Blood Separation on Compact Bio-Disc	1/29/02
PROV-136C	Surface Assembly for Immobilizing Capture Agents and Dual Bead Assays Including Optical Bio-Disc and Methods Relating Thereto	1/30/02
PROV-199A	Optical Disc Device for Immunochemical Quantification of Analytes in Biological Fluids	1/30/02
PROV-200A	Capture Layer Assemblies Including Metal Layer for Immobilization of Receptor Molecules and Related Optical Assay Discs	1/30/02
PROV-201A	Capture Layer Assemblies Including Polymer Substrates for Immobilization of Receptor Molecules and Related Optical Assay Discs	1/30/02
PROV-260C	Segmented Area Detector for BioDrive and Methods Relating Thereto	1/30/02
PROV-266A	Methods and Apparatus for Separation of Lipoproteins Using Membranes on Optical Bio-Discs	1/30/02
PROV-267A	Methods and Apparatus for Use of Undiluted Samples in Colorimetric Assays Performed on Optical Analysis Discs	1/30/02
PROV-281	Use of DVD Drive in a Fluorescence Detection Systems Including Related Optical Analysis Discs	1/30/02
PROV-107X1	Methods and Apparatus for Blood Typing with Optical Bio-Discs	1/31/02
PROV-224C	Methods for Differential Cell Counts Including Leukocytes and Use of Optical Bio-Disc for Performing Same	1/31/02
PROV-271	Bio-Safe Dispenser and Optical Analysis Disc Assembly	1/31/02
PROV-276	Colorimetric Assays Implemented on Optical Analysis Discs	1/31/02
PROV-278	Membrane Assays Implemented On Optical Analysis Disc	1/31/02
PROV-279	Bead Assays Implemented on Optical Analysis Discs	1/31/02
PROV-280	Luminescence Assays Implemented on Optical Analysis Discs	1/31/02
PROV-282	Manufacturing Process for Optical Analysis Discs Including Successive Patterning Operations	1/31/02
PROV-283	Processes for Manufacturing Optical Analysis Discs with Molded Microfluidic Structures and Discs Made According Thereto	1/31/02
PROV-285	Microfluidic Structures with Circumferential Grooves for Bonding Adhesives and Related Optical Analysis Discs	1/31/02
PROV-290A	Optical Bio-Disc Membrane Quantification Apparatus and Methods Using Control Lines as Internal Standard	1/31/02
PROV-291A	Blood Separation Transfer Pipette for Use with Analysis Systems	1/31/02

BTI Code	Title	Filing Date
PROV-292	Methods And Apparatus For Separation Of Blood Using Membranes On Optical Bio-Discs	1/31/02
PROV-293	Bio-Safety Features For A Bio Optical Disc and Disc Including Same	1/31/02
PROV-294	Methods for Triggering Through Interrupted Grooves and Related Optical Analysis Discs and Systems	1/31/02
PROV-296	Methods for Quantitation and Multiplexing of Receptor Ligand Assay by Use of Ultrathin Biomembranes Including Modified Optical Disc and Drive	1/31/02
PROV-298	Algorithms For Absolute T-Lymphocytes and Ratio From Optical Bio-Disc	1/31/02
PROV-299	Synthesis of Microparticles for Use in Disc Assays and Optical Analysis Disc Including Same	1/31/02
PROV-284	Valving Control by Flexible Membrane in a Centrifugal Device and Related Optical Analysis Disc	2/4/02
PROV-286	Size Sorting Mechanism by Flexible Membrane in a Centrifugal Device and Related Optical Analysis Disc Including Same	2/4/02
PROV-288	Mixing Process by Density Differential in a Centrifugal Device and Related Optical Analysis Disc Including Same	2/4/02
PROV-295	Use of Avidin-Biotin Systems for Increase Detection Sensitivity in Membrane Based Assays and Related Optical Analysis Disc	2/4/02
PROV-297	Application Methods For Bio-Membrane Assays In Bio-Disc System and Optical Analysis Disc Made According Thereto	2/4/02
PROV-300	Microfluidic Circuits for Promoting Fluid Movement Including Use of Expanding Chambers and Gas Pistons and Related Optical Anaysis Discs Including Same	2/4/02
PROV-302	Detection Of Pits By Differential Phase Contrast in Transmission	2/5/02
PROV-303	Safety Channels in Optical Disc Containing Microfluidic Channels	2/5/02
PROV-304	Use of Duplicate Reactive Sites in Assay Device and Optical Analysis Disc Including Same	2/5/02
PROV-305	Cluster Designation Assays Performed on Optical Bio-Disc Including Equi-Radial Analysis Zones	2/5/02
PROV-260D	Segmented Area Detector for BioDrive and Methods Relating Thereto	2/7/02
PROV-301	Sample Application Ports And Channels For Rotating Disc Invitro Diagnostics Device And Optical Analysis Disc Including Same	2/7/02
PROV-298B	Methods And Apparatus For Calculating Absolute T-Lymphocyte Counts And Ratios From Optical Bio-Disc	2/8/02
PROV-289	Manufacturing Process And Apparatus For Bio-Assay Disc Including Multi-Layer Die-Cut Adhesives And Clear Plastic Windows	2/11/02
PROV-309	Bio-Disc and Bio-Drive Analyser System Including Methods Relating Thereto	2/13/02
PROV-260E	Segmented Area Detector for BioDrive and Methods Relating Thereto	2/14/02
PROV-287	Manufacturing Process for Making Microfluidic Structures	2/14/02

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BTI Code	Title	Filing Date
	in Compact Bio-Disc and Disc Assmebly Made According Thereto	
PROV-305B	Cluster Designeation Assays Performed on Optical Bio-Disc Including Equi-Radial Analysis Zones	2/19/02
PROV-312	Determination of Cell Counting Area	2/19/02
PROV-313	Multi-Use Mapping of a BCD	2/19/02
PROV-310	Optical Systems for Membrane Assay Detection	2/20/02
PROV-311	Optical Systems for Barcode Reading in an Optical Storage Device	2/20/02
PROV-310B	Optical Systems for Membrane Assay Detection	2/21/02
PROV-317	Cardiac Marker Assays Performed on Optical Bio-Discs Including Related Apparatus and Methods	2/25/02
PROV-224D	Methods for Differential Cell Counts Including Leukocytes and Use of Optical Bio-Disc for Performing Same	3/12/02
PROV-318	Methods and Apparatus for Separating Whole Blood Components in an Optical Bio-Disc Analysis Chamber for Use in Biomedical Assays	3/18/02
PROV-309B	Bio-Disc and Bio-Drive Analyser System Including Methods Relating Thereto	4/11/02
PROV-307	Cytometric Biolab-Disc	4/19/02
PROV-308	Micro-Cytometer System for Use with Cytometric Biolab-Disc	4/19/02
PROV-290B	Optical Bio-Disc Membrane Quantification Apparatus and Methods Using Control Lines as Internal Standard	4/22/02
PROV-319	Radial Membrane Assays and Related Optical Analysis Discs and Drive Systems	4/24/02
PROV-107X1B	Methods and Apparatus for Blood Typing with Optical Bio-Discs	4/25/02
PROV-107X1C	Methods and Apparatus for Hematologic Analysis with Optical Bio-Discs	5/09/02
PROV-320	Methods For Isolation Of T-Lymphocytes For Use In Differential Cell Counting And Use Of Optical Bio-Disc For Performing Same	5/22/02
PROV-321	Methods For Calculating Specific Populations Of Cells Captured In An Optical Bio-Disc	5/22/02
PROV-263B	Sample Preparation for Colorimetric and Fluorescent Assays as Implemented on Optical Analysis Discs	5/23/02
PROV-322	Methods and Apparatus for Use in Detection and Quantitation of Cell Populations and Use of Optical Bio-Disc for Performing Same	5/24/02
PROV-323	Optical Disc Systems for Determining the Concentration of Cells or Particles in a Sample and Methods Relating Thereto	5/30/02
PROV-266B	Methods And Apparatus For Separation Of Lipoproteins Using Membranes On Optical Bio-Discs	5/31/02
PROV-267B	Methods And Apparatus For Use Of Undiluted Samples In Colorimetric Assays Performed On Optical Analysis Discs	5/31/02
PROV-324	Biomagnetic Assays and Related Optical Bio-Disc Systems	6/12/02
PROV-199B	Optical Disc Device for Immunochemical Quantification of Analytes in Biological Fluids	6/20/02
PROV-200B	Capture Layer Assemblies Including Metal Layer for	6/26/02

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BTI Code	Title	Filing Date
	Immobilization of Receptor Molecules and Related Optical Assay Discs	
PROV-325	Chromatographic Analysis on Optical Bio-Discs and Methods Relating Thereto	7/16/02
PROV-327	Optical Bio-Disc Cell Sorter and Analyser	7/25/02
PROV-328	Optical Disc Having Gradiated Reflective Layer Including Related Assays and Processing Systems	7/31/02
PROV-333	Methods for Adjusting Signal Recognition Algorithms on an Optical Analysis Disc Using Signal Deviation or Duration	7/31/02
PROV-334	Sealing System for Orifice Using Adhesive Films and Release Liner	8/7/02
PROV-326	Quantification of Absolute Human CD4+ and CD8+ T Lymphocytes from Whole Blood By Colorimetric Methods in Bio-Disc System	8/15/02
PROV-201E	Capture Layer Assemblies Including Polymer Substrates for Immobilizing of Receptor Molecules and Related Optical Assay Discs	8/21/02
PROV-224E	Methods for Differential Cell Counts Including Related Apparatus and Software for Performing Same	8/21/02
PROV-309C	Bio-Disc and Bio-Drive Analyser System Including Methods Relating Thereto	9/4/02
PROV-329	Methods for Anti-Counterfeiting Optical Discs and Related Security Features	9/17/02
PROV-330	Methods for Male Fertility Evaluation Using Optical Bio-Disc Systems	9/18/02
PROV-332	Optical Disc Assembly Including Reusable Platen and Disposable Substrate Member	9/18/02
PROV-331	Reflective Optical Disc Having Distal Members for Enhancing Return Signal Strength	9/19/02
PROV-276B	Colorimetric Assays Implemented On Optical Analysis Discs	9/24/02
PROV-335	Methods for Calculating Sub-Populations of White Blood Cells from a Blood Sample and Related Optical Bio-Disc Systems	9/24/02
PROV-278B	Membrane Assays Implemented on Optical Analysis Disc	9/25/02
PROV-279B	Bead Assays Implemented on Optical Analysis Discs	9/26/02
PROV-280B	Luminescence Assays Implemented on Optical Analysis Discs	10/1/02
PROV-262C	Methods of Chemistry Deposition for Colorimetric and Fluorescent Assays as Implemented on Optical Analysis Discs	10/9/02
PROV-268B	Methods and Related Apparatus for Evaluation of Chromagens for Use on Optical Bio-Discs	10/10/02
PROV-264B	Data Capture and Signal Processing for Colorimetric and Fluorescent Assays as Implemented on Reflective Optical Analysis Discs	10/15/02
PROV-265B	Data Capture and Signal Processing for Colorimetric and Fluorescent Assays as Implemented on Transmissive Optical Analysis Discs	10/16/02
PROV-336	Parallel Fill Microfluidic Circuits for Use in Assays Including Related Optical Bio-Discs	10/24/02

BTI Code	Title	Filing Date
PROV-337	Methods for Programming and Compiling Executable Psuedocode to Enable Interaction Between Disc Drive System and Bio-Discs	11/14/02
PROV-338	Improved Cell Counting Methods and Related Drive System and Bio-Discs	2/18/03
PROV-325B	Optical Disc Based Cation Exchange Linked Immunoassay (CELIA) and Methods Relating Thereto	2/21/03
PROV-339	Cell Selection Through Multiple Markers in a Bio-Disc	3/3/03
PROV-263C	Sample Preparation for Colorimetric and Fluorescent Assays as Implemented on Optical Analysis Discs	3/5/03
PROV-340	Method of Separating Whole Blood on a Bio-Compact Disc	3/12/03
PROV-284B	Valving Control by Flexible Membrane in Centrifugal Device and Related Optical Analysis Disc	3/17/03
PROV-325C	Optical Bio-Discs Including Spiral Fluidic Circuits for Performing Assays	4/23/03
PROV-341	Fluidic Circuits for Sample Preparation Including Bio-Discs and Methods Relating Thereto	6/19/03
PROV-267C	Fluidic Circuits, Methods and Apparatus for Use of Whole Blood Samples in Colorimetric Assays	6/27/03
PROV-277B	Methods and Apparatus for Blood Separation and Analysis Using Membranes on an Optical Disc	7/15/03
PROV-341B	Fluidic Circuits for Sample Preparation Including Bio-Discs and Methods Relating Thereto	7/25/03

U.S Unpublished Applications

BTI Code	Title	Filing Date
UU-1	Analytical Disc with Optically Trackable Encoded Information and Related Optical Inspection System	8/21/00
UU-2	Apparatus and Method for Carrying Out Histological Analysis of Specimens	9/20/00
UU-3	Apparatus and Method for Carrying Out Analysis of Samples Using Radiation Detector Output Ratios	11/16/01
UU-4	Apparatus and Method for Carrying Out Analysis of Samples Using Split Beam Radiation Inspection	11/16/01
UU-5	Apparatus and Method for Conducting Samples	6/11/99
UU-6	Spatially Addressable Combinatorial Chemical Arrays in CD-ROM Format	3/18/99
UU-7	Spatially Addressable, Cleavable Reflective Signal Elements, Assay Device and Method	10/12/01
UU-8	Optical Disk-Based Assay Devices and Methods	7/23/01
UU-9	Gene Sequencer and Methods	5/21/01
UU-10	Cassette and Applicator for Biological and Chemical Sample Collection	2/20/01
UU-11	Trackable Optical Discs with Concurrently Readable Analyte Material	10/26/99
UU-12	Trackable Optical Discs with Concurrently Readable Nonoperational Structures	5/5/00
UU-13	Methods and Apparatus for Patterning Nonoperational Structures on an Optical Disc	8/21/00
UU-14	Methods and Apparatus for Analyzing Operational and Nonoperational Data Acquired from Optical Discs	8/23/99
UU-15	Methods and Apparatus for Optical Disc Data Acquisition Using Physical Synchronization Markers	8/21/00
UU-16	Supramolecule for Therapeutic Binding Molecule Complexes	3/25/02
UU-17	Variable Sampling Control for Rendering Pixelization of Analysis Results in a Bio-Disc Assembly and Apparatus Relating Thereto	5/16/02
UU-18	Multi-Purpose Optical Analysis Optical Bio-Disc for Conducting Assays and Various Reporting Agents for Use Therewith	7/12/02
UU-19	Method and Apparatus for Bonded Fluidic Circuit for Optical Bio-Disc	7/24/02
UU-20	Magnetic Assisted Detection of Magnetic Beads Using Optical Disc Drives	7/24/02
UU-21	Segmented Area Detector for Biodrive and Methods Relating Thereto	10/24/02
UU-22	Optical Bio-Discs and Fluidic Circuits for Analysis of Cells and Methods Relating Thereto	11/13/02
UU-23	Methods and Apparatus for Blood Typing with Optical Bio-discs	11/15/02
UU-24	Magneto-Optical Bio-Discs and Systems Including Related Methods	11/27/02

BTI Code	Title	Filing Date
UU-25	Method and Apparatus for Visualizing Data	1/13/03
UU-26	Methods and Apparatus for Extracting Data From an Optical Analysis Disc	1/14/03
UU-27	Optical Discs Including Equi-Radial and/or Spiral Analysis Zones and Related Disc Drive Systems and Methods	1/15/03
UU-28	Bio-Safe Dispenser and Optical Analysis Disc Assembly	1/17/03
UU-29	Processes for Manufacturing Optical Analysis Discs with Molded Microfluidic Structures and Discs Made According Thereto	1/21/03
UU-30	Multi-Purpose Optical Analysis Disc for Conducting Assays and Related Methods for Attaching Capture Agents	1/21/03
UU-31	Method for Triggering Through Disc Grooves and Related Optical Analysis Discs and System	1/23/03
UU-32	Bio-Safety Features for Optical Analysis Disc and Disc System Including Same	1/23/03
UU-33	Manufacturing Processes for Making Optical Analysis Discs Including Successive Patterning Operations and Optical Discs Thereby Manufactured	1/24/03
UU-34	Processes for Manufacturing Optical Analysis Discs with Molded Microfluidic Structures and Discs Made According Thereto	1/27/03
UU-35	Method and Apparatus for Logical Triggering	1/28/03
UU-36	Methods for Synthesis of Bio-Active Nanoparticles and Nanocapsules for Use in Optical Bio-Disc Assays and Disc Assembly Including Same	1/30/03
UU-37	Methods and An Apparatus for Multi-Use Mapping of An Optical Bio-Disc	2/19/03

International Unpublished Applications

BTI Code	Title	Filing Date
U 1	Cassette and Applicator for Biological and Chemical Sample Collection	8/24/99
U 2	Cassette and Applicator for Biological and Chemical Sample Collection	9/9/99
U 3	Trackable Optical Discs with Concurrently Readable Nonoperational Structures	4/24/00
U 4	Multi-Parameter Assays Including Analysis Discs and Methods Relating Thereto	4/11/02
U 5	Optical Disc System and Related Detecting Methods for Analysis of Microscopic Structures	7/12/02
U 6	Multi-Purpose Optical Analysis Optical Bio-Disc for Conducting Assays and Various Reporting Agents for Use Therewith	7/12/02
U 7	Capture Layer Assemblies for Cellular Assays Including Related Optical Analysis Discs and Methods	8/30/02
U 8	Segmented Area Detector for Biodrive and Methods Relating Thereto	10/24/02
U 9	Methods and Apparatus for Extracting Data From an Optical Analysis Disc	1/14/03
U 10	Optical Discs Including Equi-Radial and/or Spiral Analysis Zones and Related Disc Drive Systems and Methods	1/15/03
U 11	Bio-Safe Dispenser and Optical Analysis Disc Assembly	1/17/03
U 12	Processes for Manufacturing Optical Analysis Discs with Molded Microfluidic Structures and Discs Made According Thereto	1/21/03
U 13	Multi-Purpose Optical Analysis Disc for Conducting Assays and Related Methods for Attaching Capture Agents	1/21/03
U 14	Method for Triggering Through Disc Grooves and Related Optical Analysis Discs and System	1/23/03
U 15	Bio-Safety Features for Optical Analysis Disc and Disc System Including Same	1/23/03
U 16	Manufacturing Processes for Making Optical Analysis Discs Including Successive Patterning Operations and Optical Discs Thereby Manufactured	1/24/03
U 17	Processes for Manufacturing Optical Analysis Discs with Molded Microfluidic Structures and Discs Made According Thereto	1/27/03
U 18	Method and Apparatus for Logical Triggering	1/28/03
U 19	Methods for Synthesis of Bio-Active Nanoparticles and Nanocapsules for Use in Optical Bio-Disc Assays and Disc Assembly Including Same	1/30/03
U 20	Methods and An Apparatus for Multi-Use Mapping of An Optical Bio-Disc	2/19/03
U 21	Optical Discs Including Equi-Radial and/or Spiral Analysis Zones and Related Disc Drive Systems and Methods	7/10/03